

## **19. RECREATION AND TOURISM**

### **19.1 INTRODUCTION**

This chapter assesses the potential impacts of the proposed development on recreation and tourism in Shetland. The Viking Wind Farm development is located in the central mainland but any assessment of the impacts on tourism and recreation requires taking account of Shetland as a whole. The assessment has been undertaken by BMT Cordah Ltd.

The assessment has examined the potential impact on access to the countryside and tourism, from the perspective of Shetland in general and the central mainland in particular. Tourists' perception and consequent reactions will relate closely to changes in landscape character and visual amenity. The assessment for recreation and tourism is therefore closely linked to the Impact Assessments for Landscape Character (Chapter 8) and Visual Impact Assessment (Chapter 9), and also overlaps with the Impact Assessments for Ecology (Chapter 10), Ornithology (Chapter 11), Cultural Heritage (Chapter 13), Roads and Traffic (Chapter 15) and Economic and Social Assessment (Chapter 17).

Mitigation and monitoring measures are presented within the final sections of the chapter.

### **19.2 SCOPE OF ASSESSMENT**

The scope of the assessment is as follows:

- to research the relationship between wind farms and tourism;
- to describe the existing recreation and tourism sector in Shetland (scale and composition);
- to assess the potential impacts on recreation, specifically the likely impact on access to the countryside;
- to assess the potential impact on tourism, including tourists' perception of Shetland in general and the central mainland in particular;
- to identify potential mitigation measures.

#### **19.2.1 Study area**

The study area for the recreational and tourism assessment covers the whole of Shetland, since any positive or negative impacts are likely to be felt not only within the Viking Wind Farm site and its immediate vicinity but more widely.

#### **19.2.2 Scoping and consultation**

Scoping and consultation responses relating to recreation and tourism are summarised in Table 1.

**Table 1: Summary of scoping and consultation responses**

Consultees	Key Item of Response
Historic Scotland	The visual effect on built heritage sites should be assessed. The cumulative visual effect on the settings of built heritage sites should be assessed, An assessment of the indirect effect on Lunna House designated landscape should be carried out.
Scottish Executive	The impact of the development on the setting of Lunna House should be assessed.
SNH	The impact of the development on Lunna House, Belmont House and Brough Lodge, which are all listed in the Inventory of Gardens and Designed Landscapes should be assessed.

No mention was made specifically regarding tourism and recreation by the consultees in the scoping and consultation responses.

### 19.2.3 Effects to be assessed

Table 2 and Table 3 present the potential significant effects identified in scoping and form the basis of the impacts to be assessed in this chapter. In addition potential secondary effects are identified in Table 4.

**Table 2: Potential recreation and tourism construction effects**

Construction effects	Impact	Potential Effects on Receptors	Specific Receptor identified in Scoping
General	Restriction of access at construction site	Loss of recreational amenity	-
	Effect on visitors' perceptions of landscape character and visual amenity	Loss of tourist income	-
	Disruption of tourism business due to displacement of tourist visitors by construction employees in accommodation and additional construction road traffic	Loss of business at visitor attractions and loss of income for those within the wider tourist industry	-
	Disturbance of recreational activities	Loss of recreational amenity	-
Mobile plant operations	Refer to General Impacts	Loss of tourist income	-
Borrow pit operations	Refer to General Impacts	Loss of tourist income	-
Traffic	Refer to General Impacts	Loss of tourist income	-
Access track construction including cable laying	Refer to General Impacts	Loss of tourist income	-
Construction	Refer to General Impacts	Loss of tourist income	-

compounds			
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**Table 3: Potential recreational and tourism operational effects**

Operational effects	Impact	Potential Effects	Specific Receptor identified in Scoping
General	Effect on visitors' perceptions of landscape character and visual amenity	Loss of tourist income	-
Turbines	Visibility of turbines	Change to recreational amenity	Lunna House designated landscape, built heritage sites
	Noise of turbines	Change to recreational amenity	
Tracks	Access provision	Creation of recreational amenity	-
Anemometers	Refer to General Impacts (Table 2)	Loss of tourist income	-
Sub-station/control building	Refer to General Impacts (Table 2)	Loss of tourist income	-
Crane pads	Refer to General Impacts (Table 2)	Loss of tourist income	-
Borrow pits	Refer to General Impacts (Table 2)	Loss of tourist income	-

**Table 4: Potential secondary effects**

Construction & Operational Effects	Secondary Impact	Potential Effects	Specific Receptor identified in Scoping
Recreational Activities and Cultural Heritage	Changes in cultural heritage settings may impact tourism	Loss of tourist income	
Economic	Changes in tourism activity may impact on economic development and affluence	Change in tourist income	

**19.2.4 Issues scoped out of assessment**

Impacts arising from the process of decommissioning have not been scoped out since they are of a similar nature to construction issues, but of a smaller scale and shorter duration. However, the results of decommissioning (i.e. the removal of the wind farm) are taken into account in assessing ongoing and operational impacts where appropriate.

**19.3 POLICY CONTEXT**

The general policy context relating to wind energy developments is laid out in Chapter 7. The assessment of impacts on tourism and recreation receptors made in this chapter is considered in the context of the following relevant policies and guidance.

Planning policy and guidance is produced at three levels:

- National planning policy and guidance in the form of the National Planning Framework (NPF), Scottish Planning Policies (SPPs), National Planning Policy Guidelines (NPPGs) and Planning Advice Notes (PANs), produced by the Scottish Government;
- Structure Plans, produced by local authorities; and
- Local Plans, produced by local authorities.

The Structure and Local Plans for a council area together form the statutory Development Plan. In addition, a Development Plan may be supported by Supplementary Planning Guidance (SPG) usually produced at Local Authority level. SPG can form a material consideration but does not formally form part of the statutory Development Plan.

### 19.3.1 National Level

#### (a) SPP 6: Renewable Energy

SPP 6 provides national planning policy on renewable energy. SPP 6 was published in March 2007 and replaced NPPG 6. It sets out national planning policy for renewable energy developments that Planning Authorities need to consider when considering planning applications. The SPP refers to Scotland's sustainable development strategy which has as a key priority, the need to change the way Scotland generates and uses energy with a view to reducing greenhouse gas emissions and maximising Scotland's considerable renewable energy potential.

#### (b) NPPG 14 Natural Heritage (1999)

Paragraphs 21 and 22 of NPPG 14 provide advice on landscape conservation for tourism as follows:

*The natural heritage is enjoyed both for its intrinsic value and as a setting for open-air recreational and educational activities which depend on its qualities. Many of the direct benefits which accrue to rural communities from the natural heritage come from economic activities dependent on day-trip visitors or tourism. Good provision for open-air recreation and access to the natural heritage also benefits the nation indirectly through less quantifiable benefits in terms of health and quality of life. Regional and Country Parks play a valuable role in providing opportunities for urban populations to gain access to attractive areas of countryside for recreation and enjoyment of the natural heritage. Green open space in and around our towns and cities makes it possible for people to maintain daily contact with the natural world and offers opportunities for local communities to play an active part in caring for the environment.*

*Planning authorities should seek to identify opportunities for promoting the enjoyment and understanding of the natural heritage which are compatible with its conservation. Guidance on how this may be done has been prepared by SNH.*

#### (c) SPP 15 Planning for Rural Development (2005)

Paragraph 14 of SPP 15 provides the following advice on tourism:

*Tourism is of vital importance to the social, economic, environmental and cultural well-being of rural Scotland. It accounts for 9% of Scottish jobs, rising to nearly 14% in Perthshire. Many areas depend on it for jobs and infrastructure. Planning authorities*

*should support the development of the tourism and leisure industry with appropriate policies on siting and design of new development. Large scale mixed use projects, such as those combining a golf course with housing and commercial development, present a particular challenge. The quality of the final product is crucial and planning authorities will have to carefully weigh the economic benefits with the environmental and social impact. Planning authorities also need to be aware of market growth areas such as business and cultural tourism. They should be supported by the provision of appropriate facilities at key locations. Countryside management, the provision of recreational facilities and the development of core path networks have an important role in underpinning rural tourism.*

### **19.3.2 Planning Advice Notes (PANs)**

The purpose of the PAN series is to provide advice on good planning practice and other relevant information, for both formulating Development Plans and determining planning applications. PAN 45, Renewable Energy Technologies (2002), is of specific relevance and whilst it predates SPP 6, it supports its policies providing advice and information on technical issues.

#### **(a) Planning Advice Note (PAN) 45: Renewable Energy Technologies**

Paragraph 172 of PAN 45 contains the following advice on tourism and recreation:

*Tourism is a well established and valuable contributor to the rural economy and to the prosperity of many towns and villages in rural Scotland. It is mainly associated with Scotland's natural and scenic and cultural heritage. It is therefore important that the role of tourism in the rural economy and the assets on which it is based should be reconciled with the need to promote renewable energy generation.*

### **19.3.3 Land Reform (Scotland) Act 2003**

Part 1 of the Land Reform (Scotland) Act 2003 gives everyone statutory access rights to most land and inland water. People only have these rights if they exercise them responsibly by respecting people's privacy, safety and livelihoods, and Scotland's environment. Equally, land managers have to manage their land and water responsibly in relation to access rights.

The Scottish Outdoor Access Code provides detailed guidance on the responsibilities of those exercising access rights and of those managing land and water. This Code has been approved by Ministers and the Scottish Parliament.

The Code is based on three key principles and these apply equally to the public and to land managers.

- Respect the interests of other people. Acting with courtesy, consideration and awareness is very important. If you are exercising access rights, make sure that you respect the privacy, safety and livelihoods of those living or working in the outdoors, and the needs of other people enjoying the outdoors. If you are a land manager, respect people's use of the outdoors and their need for a safe and enjoyable visit.
- Care for the environment. If you are exercising access rights, look after the places you visit and enjoy, and leave the land as you find it. If you are a land manager, help maintain the natural and cultural features which make the outdoors attractive to visit and enjoy.

- Take responsibility for your own actions. If you are exercising access rights, remember that the outdoors cannot be made risk-free and act with care at all times for your own safety and that of others. If you are a land manager, act with care at all times for people's safety.

The Land Reform (2003) Act requires Shetland Island Council to establish core paths throughout Shetland and an access forum, with the following objectives:

- To act as the local Access Forum for Shetland and to undertake the functions of that body if and when statutorily required to be established by Shetland Islands Council.
- To advise Shetland Islands Council on strategic access issues and the development of the Core Path Plan Network in Shetland through the policies and priorities of the Shetland Access Strategy.
- To promote the responsible access through the Scottish Outdoor Access Code.
- To promote the sharing of knowledge, awareness, and good practices.
- To offer Shetland Islands Council advice and assistance in resolving access problems.

#### **19.3.4 Regional Level**

##### **(a) Structure Plan**

The approved Shetland Structure Plan (Shetland Islands Council, 2000) seeks to promote the sustainable development of Shetland. It contains a sustainable vision for 2016, which provides the values to be followed in the policies, and direction in tackling key issues.

##### *Chapter 10 – Tourism*

*Topic Goal – To create a sustainable tourism industry that achieves long term economic development and avoids damage to the natural and built environment.*

*The Council's aims in respect of tourism have been set out in the Shetland Tourism Strategy that was prepared in 1999, in partnership with Shetland Enterprise and Shetland Islands Tourism. The implementation of this strategy will be by means of an Action Plan that will be completed by the year 2000.*

##### **(b) Local Plan**

The Shetland Local Plan (Shetland Islands Council, 2004) is the current adopted Local Plan covering the proposed development area. The Local Plan is based on the same four aims as the Structure Plan, and it supports these with specific policies.

*Chapter 10 – Tourism Policy is concerned with visitor accommodation.*

*Development proposals to provide hotel, guest house, bed and breakfast, camping bōd or self catering accommodation which extend and improve local provision will be supported where they:*

- *Do not adversely affect highway and pedestrian safety, the local landscape or environment*
- *Are generally compatible with surrounding land uses and*

- *Accord with other Structure and Local Plan policies, particularly the relevant criteria in the Local Plan policies LP NE10, LP IND4, LP IND5, and LP IND6*

## **19.4 METHODOLOGY**

### **19.4.1 Overview**

The following section outlines the method used for the tourism and recreation impact assessment. The assessment comprises:

- a review of existing recreation and tourism resources,
- prediction and characterisation of impacts;
- evaluation of effects significance;
- consideration of mitigation measures, where appropriate.

As determination of the impacts on tourism and recreation includes a subjective element, a qualitative approach has been used in this study. Account has been taken of the most recent study which provides information and data on tourists' responses to wind farms in Scotland (Glasgow Caledonian University, 2008). This has supplemented other reports which assessed the impact on tourism of wind farms (BWEA, 2006 and MORI Scotland, 2002).

### **19.4.2 Baseline assessment**

The baseline assessment was desk and consultation based, and sought to identify the location and extent of the following recreation and tourism assets:

- accommodation and tourism generally;
- designated tourist resources;
- walking/hill-walking;
- cycling;
- fishing;
- nature based attractions and activities such as bird watching;
- cultural heritage attractions; and
- viewpoints.

### **19.4.3 Effects evaluation**

#### **(a) Receptor sensitivity**

Sensitivity of a receptor to the proposed development considers the nature of the receptor. For example hill walkers require access and are more likely to be looking at the landscape, whereas visitors taking a boat trip around the coast whale watching will not be focused primarily on the landscape. In addition to receptor sensitivity being dependent on the nature of the receptor, the importance to that receptor of the view changing should be considered.

Lastly, the relative popularity of the resource is also considered where such information is available and may alter the sensitivity with the sensitivity of popular resources being assumed to be higher (+), and of less popular resources being assumed to be lower (-).

In this assessment receptor sensitivity is ranked as follows:

**Table 5: Definitions of recreation sensitivity**

<b>Sensitivity</b>	<b>Definition</b>
High	The most sensitive receptors are likely to be those where uninterrupted access is essential or landscape is core to the recreational or tourist experience, for example designated tourist resources (e.g. national tourist routes, national scenic areas) or designated tourist walking and cycling routes.
Medium	Moderate sensitivity receptors are likely to be those where landscape may form an important element of, or context for the recreation or tourist experience. Moderate sensitivity receptors are therefore likely to include: <ul style="list-style-type: none"> <li>• hill walking activities,</li> <li>• mountain biking</li> <li>• fishing lochs and lochans;</li> <li>• land based nature attractions and activities;</li> <li>• cultural heritage attractions;</li> <li>• viewpoints.</li> </ul>
Low	Low sensitivity receptors are likely to be those where landscape is likely to form a minor or incidental element of the recreation or tourism experience, for example: <ul style="list-style-type: none"> <li>• other visitor attractions not identified above.</li> </ul>

(b) **Impact magnitude**

Impacts are discussed qualitatively. The assessment of effects on recreation and tourism in the form of change in landscape and visual amenity has been informed by the results of the landscape and visual impact assessment (Chapters 9 and 10).

(c) **Assessment of effects**

The assessment of effects is based on the extent to which tourists' participation (enjoyment) in an activity will be affected. Central to this is the importance of landscape and scenery to tourism and recreational activities and the resultant visual impact of the Viking Wind Farm development on the landscape and scenery.

This assessment uses the following criteria to determine the level of significance of effects on tourism and recreation.



*Significant Adverse (or Beneficial) Impact*

Where the development results in notable change in the behaviour of tourists, for example they consider alternative locations and/or activities outside Shetland; or where the wind farm results in a positive enhancement in tourism attraction or recreational activity through, for example, green tourism.

*Moderate Adverse (or Beneficial) Impact*

Where the development results in moderate change in the behaviour of tourists, for example they consider avoiding specific locations or activities within Shetland, or travelling to see the wind farm.

*Minor/Negligible Impact*

Where the development would not affect tourist enjoyment of the location or activity and therefore would result in no change to tourist behaviour.

**19.4.4 Limitations of the assessment**

The absence of specific guidance on a method of assessment of effects on tourism and recreation results in this assessment being qualitative. This chapter does not include assessment of the socio-economic impacts of tourism and recreation of the Viking Wind Farm, which has been addressed in Chapter 17.

**19.5 BASELINE CONDITIONS****19.5.1 Context****(a) Visitor demographics**

The recently completed visitor survey (AB Associates Ltd, 2006) has revealed a significant growth in visitor numbers and spend over the last five years. The total visitors in 2006 were estimated to be over 104,000 and total spend was £16.43m. This compares with 66,484 visitors and £11.9m in spend in 2000 from the previous visitor survey and represents a 57% increase in numbers and an increased spend of 38%. More recent figures would suggest that the growth in holiday visitors has not been maintained while business visitors have continued to grow.

AB Associates Ltd (2006) details the origin of visitors to Shetland. The largest proportion of visitors is from the UK (76%), with the remainder from overseas (24%). There has been a small percentage increase from overseas since 2000 and consequent decrease from the UK. The most significant market remains Scotland at 44%.

The most significant proportionate changes in number of visits since 2000 were a rise in first time visitors, with 51% of respondents on their first visit to Shetland. There was also a fall in those who have visited more than 10 times.

The majority of visitors (65%) were aged 25-55, with 30% over 55 and 13% under 24. Individual travel forms the largest proportion of respondent travel to Shetland (47%), reflecting the heightened proportionate level of individual business travel to Shetland. Twenty-five percent are couples having risen by 5% since 2000, with family groups declining proportionately to 6% since 2000.

**(b) Reasons for visiting Shetland**

Shetland has a clearly defined natural boundary, identity and tourism market which is distinct from Mainland Scotland. Tourists visit Shetland to observe and experience activities and attractions they can't see at home, such as the Fjord like valleys, seascapes and wildlife.

AB Associates (2006) identifies the main reasons why holiday visitors come to Shetland and also their main highlights from the visit. The provisional results suggest that the most important factors for tourists were peace and quiet, remoteness, scenery, landscape and wildlife including birds.

When assessing areas visited in Shetland, Lerwick has the highest average stay with the south mainland coming second. The fact that visitors listed Sumburgh Head as the most popular highlight of their visit concurs with the focus of tourist interest in Shetland being around Lerwick and the south mainland.

Highlights for tourists in order of importance were:

- scenery;
- people – friendliness and hospitality;
- wildlife;
- birds.

Recreational activities are an important aspect of tourism activity in Shetland. AB Associates (2006) survey reported that 54% of respondents stated that they had no main recreational activity whilst on Shetland, however only 16% stated they had not participated in any recreational activities. The most frequently mentioned recreational activities were as follows:

- General sightseeing;
- walking; and
- bird watching

The most frequently participated in were as follows:

- Short walks;
- beaches and scenery;
- general sightseeing;
- bird watching;
- historic and archaeological sites; and
- painting and photography.

The following paragraphs identify the main tourism and recreational resources in Shetland. The majority of these tourism and recreational resources are outwith the area of the Viking Wind Farm development which is located on the central mainland but the development will be visible from some tourism attractions and also on route for tourists visiting other locations and resources. This will be relevant for tourist attractions and resources on the central and north mainland and some of the smaller islands off the central and north mainland.

## 19.5.2 Designations

A number of sites designated in Shetland of landscape, nature conservation and cultural heritage significance are also attractions for tourism and recreation. These are detailed below.

### (a) Landscape designations

Full details of all landscape designations are provided in Chapter 8. The following sites designated for landscape interest are also relevant for tourism and recreation.

#### Shetland National Scenic Area (NSA)

Shetland has one National Scenic Area (NSA) which is comprises seven separate small areas of coastal landscape in Shetland, identified for their outstanding scenic interest. These areas lie principally in the south-west and northern extremities of the archipelago and include Fair Isle, Foula, the western flank of Dunrossness and the Deeps, part of Muckle Roe, Esha Ness, Uyea Isle and Fethaland, and Herma Ness (Figure 19.1). The Dunrossness and The Deeps site is located approximately 3.5 km from turbine K76, which is the most southerly turbine in the Viking Wind Farm development. The Muckle Roe site is located approximately 5.4 km to the west of turbine D32, although as the Muckle Roe site is on the seaward side of the island the Viking Wind Farm development will not be visible from anywhere within the NSA (Chapter 8). The Viking Wind Farm development will therefore be visible from some of the coastal landscape sites that form the Shetland NSA. .

#### Lunna House

Lunna House is set in a designated landscape consisting of a walled enclosure, an eye catcher and buildings which together form an attractive composition of framed views. It is described in the Inventory of Designed Landscapes as ‘Probably the best surviving example of a formal designed landscape... in characteristic Shetland style...’

The main view follows an axis southwest from the house, through the ‘Gothic Cottage,’ a 19th century built ruined cottage with a gothic styled west end wall, towards ‘Hunter’s Monument,’ a square tower with battlemented flanking walls sited on a hill opposite the house. Further views are obtained from the house looking west and south across West Lunna Voe and East Lunna Voe. The set out views and composition of the landscape give the Lunna House Designed Landscape a high scenic quality. The landscape value is also High because of the historical significance of the landscape and the views.

#### Belmont House

Belmont House is a Designated Landscape which will not be significantly impacted by the Viking Wind Farm development (Chapter 9).

#### Brough lodge

Brough Lodge is a Designated Landscape which will not be significantly impacted by the Viking Wind Farm development (Chapter 9).

### (b) Nature conservation designations

A number of sites are designated for nature conservation importance throughout Shetland and full details are provided in Chapters 10 and 11. Noss National Nature Reserve,

Hermaness National Nature Reserve and Sumburgh Head are all listed as top tourist attractions in Shetland (Shetland Islands Council, 2007).

*Noss National Nature Reserve.*

The Island of Noss lies a short distance east of Bressay, which itself is just one mile east of Lerwick Harbour and 16.5 km from the Viking Wind Farm development. It is renowned as one of the most impressive wildlife sites in Britain, home to tens of thousands of seabirds in the summer months. These seabird colonies are easily reached and the birds can be seen close-up. Boat tours are available from Lerwick.

*Hermaness National Nature Reserve*

Hermaness NNR is located on the island of Unst, five miles from Baltasound and 30 km from the Viking Wind Farm development. It is home to a population of 100,000 breeding birds, such as gannets and puffins. It is also known as the ‘land of the bonxie’, as it is the third largest colony of great skuas in the world.

*Sumburgh Head RSPB Reserve*

Sumburgh Head is the southernmost point of the mainland of Shetland and is 43 km from the Viking Wind Farm development. The area is an RSPB reserve and is a favourite place at which to see puffins. Other birds such as kittiwakes and guillemots can also be seen here, and it is also a good vantage point from which to whale-watch.

There are a number of other NNRs and RSPB reserves on the mainland and surrounding islands, such as Fetlar, which are also of interest to tourists.

There are numerous Sites of Scientific Interest (SSSIs) on Shetland, as detailed in Chapter 10 (Non-avian Ecology) and Chapter 11 (Ornithology). These sites are of interest to tourists but predominately to visitors with a specialist interest in the reason for their designation, for example the Laxo Burn SSSI and the Burn of Lunklet SSSI located in Weisdale, approximately 0.5 km from the nearest turbine in the Viking Wind Farm development.

*Kergord Plantations SSSI*

The Kergord plantations are located in Upper Kergord, in the Gonfirth/Kergord area. The closest compartment is 845 m from the nearest turbine in the Viking Wind Farm development. They are the only plantations in Shetland, other than in high-walled gardens. They consist of 7 woods in the form of shelter belts and extend to about 9 acres and were formed between 1913 and 1920 by Dr. George Munro. The 5 narrow belts, and the margins of the two broader blocks, were planted as row-by-row mixtures using a number of different species. The plantations provide a locally important habitat for feeding and breeding birds, including woodpigeon, blackcap, chaffinch and song thrush, and support most of Shetland’s breeding rook population. The plantations are a popular location for bird watching.

(c) **Cultural heritage sites**

Shetland has a large number of cultural heritage sites, many of which are very well preserved, and full details are provided in Chapter 13, Cultural Heritage. The following is a selection of the best known designated sites of cultural heritage interest in Shetland. Designated sites are either Scheduled Ancient Monuments or Listed Buildings.

*Hill of Dale Chambered Cairn*

Hill of Dale chambered cairn is a Scheduled Ancient Monument and is located within the Delting Quadrant. It is about 750 m from the nearest turbine.

*Grobsness Haa*

Grobsness Haa is an 18th century Category B Listed Building and is located within the Kergord quadrant. It is about 3.5 km from the nearest turbine.

*Stanydale Temple*

This is a Neolithic hall with ruins of houses, walls and cairns of the same period around it. The main feature of this important prehistoric site is the setting, known as the 'temple'. It is a heel-shaped structure with a single entrance passage leading to a large oval hall. It is located approximately 8.0 km from the proposed Viking Wind Farm development site within the Sandsting area. It is in the care of Historic Scotland.

*Law Ting Holm*

Law Ting Holm is a promontory that juts out into the Loch of Tingwall. This was where the ancient parliament for the Shetlands used to meet and at that time it would have been an island. It is located near Scalloway in the Tingwall area, approximately 10.1 km from the nearest proposed wind turbine in the Viking Wind Farm development site.

*Clickimin Broch*

A well preserved broch and promontory fort surrounded by an Iron Age settlement dating from between 1000 and 100 BC, located to the south-west of Lerwick. It is approximately 15 km from the proposed development site.

*Scalloway Castle*

The town of Scalloway located 5 km west of Lerwick was the capital of Shetland until 1708. The ruins of Scalloway castle dominate the view of the town. This is a castellated mansion built in 1600 by Patrick Stewart, Earl of Orkney. It is a very popular tourist attraction and is located approximately 13.6 km from the proposed development site.

*Scourd of Brouster*

The hillside of Scord of Brouster is littered with the remains of a Neolithic settlement. Some oval houses and their system of interlinked field walls have been found. It is located in Aithsting in the West mainland approximately 11 km from the proposed development site.

*Fort Charlotte*

Fort Charlotte is a five-sided artillery fort, built in 1665 to protect the Sound of Bressay from the Dutch, and rebuilt in 1781. It is located in Lerwick and is approximately 15 km from the proposed development site.

*Jarlshof and Old Scatness*

Jarlshof and Old Scatness is the best known archaeological site in Shetland and a very popular tourist attraction. It is one of the most well-preserved and comprehensive archaeological sites in Scotland. Archaeology from the Stone, Bronze and Iron Ages, as

well as Medieval, Pictish and Norse examples are found at the site. The main settlement dates from the Bronze Age (2500 BC) and the site was inhabited until Viking times. It is located at the southern most point of mainland Shetland approximately 43 km from the proposed development site.

#### Mousa Broch

Mousa Broch is the finest example of an Iron Age Broch or round structure in Scotland. It is the tallest broch (13 m high) still standing in world and is thought to have been constructed ~100 BC. It is a very popular tourist attraction in Shetland and is located on the island of Mousa approximately 29 km from the proposed development site.

#### Culswick Broch

This red granite broch is one of many brochs around the South and West Mainland, dating from the Iron Age. The entrance has a remarkable massive triangular lintel stone and the entire broch is built of irregular shaped stone. It is located in the west coast mainland approximately 14 km south-west of the proposed development site.

#### Muness Castle

Muness, the most northerly castle in the British Isles, located 33 km from the Viking Wind Farm development and built for Lawrence Bruce in 1598. It consists of a tower house with circular towers and a number of fine architectural details have been retained.

#### Busta Brae Hotel

Busta Brae Hotel is a listed building located approximately 3.5 km from the Viking Wind Farm development. The hotel provides accommodation for tourists to Shetland.

### **19.5.3 Other tourist facilities/attractions**

There are numerous additional tourist facilities and attractions in Shetland. A comprehensive list has not been provided in this assessment, only those identified of interest to the Viking Wind Farm development. Many of the most used tourist attractions are not located within the vicinity of the Viking Wind Farm development but elsewhere in Shetland, such as the Shetland Museum in Lerwick and the Fetlar Interpretive Centre on the island of Fetlar.

#### **(a) Weisdale Mill (including Bonhoga Gallery)**

Weisdale Mill is a listed building and was built in 1855 as the largest corn mill in Shetland (Figure 19.2). It houses the Bonhoga Art Gallery and is located at the head of Weisdale Voe, 1.5 km from the nearest turbine in the Viking Wind Farm development. The Bonhoga Gallery is listed as the second most popular visitor attraction in Shetland for 2005/06 (Shetland Island Council, 2007).

### **19.5.4 Recreational activities**

Recreational activities are outdoor based and focus on the scenery and wildlife of Shetland.

#### **(a) Nature and wildlife**

Shetland has a rich and varied wildlife, details of which are presented in Chapter 10 and Chapter 11. Wildlife of interest in Shetland includes sea mammals, such as common seals,

grey seals, harbour porpoises and otters and is focused around the coast of Shetland. An otter survey has been undertaken within the Viking Wind Farm survey area suggesting the otter population is not widely dispersed throughout the proposed development area, and, therefore, it is assumed to be at relatively low density (Chapter 10). Cetaceans including killer whales (orcas), white-sided dolphins and minke whales are also often sighted around Shetland.

Within the Viking Wind Farm development area there is a number of internationally important moorland breeding birds, including the red-throated diver, merlin, golden plover, dunlin, arctic tern, whimbrel, snipe, curlew, arctic skua, great skua and migratory and wintering whooper swan (Chapter 11). Of these birds the red throated diver, whimbrel and merlin are listed as Schedule 1 species under the Wildlife and Countryside Act 1981.

Wildlife watching including bird-watching is done both independently and as part of guided tours. Bird-watching is an important recreational activity in Shetland. There are internationally important populations of sea birds in Shetland, including numbers of rare birds. This is reflected in the number of National Nature Reserves and RSPB sites around Shetland. In addition a number of locations are known as popular locations for bird-watching, such as:

#### Eshaness

Eshaness is located on the western tip of Northmavine in the North Mainland of Shetland, approximately 20 km from the Viking Wind Farm development. It has remarkable cliffs, stack and rock formations jutting out into the Atlantic Ocean and is a very popular tourist attraction in Shetland.

### (b) **Walking**

Walking is a popular recreational activity in Shetland and provides an opportunity to discover ancient historical sites dating back to Neolithic times and to observe the wildlife of Shetland. Traditionally access has not been restricted in Shetland and statutory access rights under the Land Reform (Scotland) Act 2003 and the Scottish Access Code are now in effect.

Visit Shetland promotes a number of walking routes in Shetland (Figure 19.2) and these routes are predominately located around the coast of Shetland and therefore not within the Viking Wind Farm development. Shetland Islands Council is also preparing the Core Paths Plan and Shetland Countryside Access Strategy (Shetland Islands Council, 2005), which identifies a number of walking routes throughout Shetland for use by local people and tourists.

Hills in Scotland of any height with a drop of 150 metres (nearly 500 ft) or more on all sides are classified as a "Marilyn". The Marilyns are so-called by the list's compiler, Alan Dawson, after the more famous mountain list the Munros. There are 19 Marilyns on Shetland and Scalla Field (Grid Reference HU38932 57260) is within the Viking Wind Farm development area (Figure 19.2).

### (c) **Cycling**

Visit Shetland has information on twenty cycle routes around Shetland (Figure 19.2). These routes follow both the main and minor roads around Shetland. Important routes

with respect to the Viking Wind Farm development are Routes 7 (Brae) and 11 (Voe) which tour close to the Viking Wind Farm.

Shetland is included in the North Sea Cycle Route, which covers 6,000 km of cycling routes through 8 countries around the North Sea. In Shetland the route is from Lerwick to Sullom Voe and includes Routes 7 and 11 above. This will take any cyclists using the North Sea Cycle route within close proximity of the Viking Wind Farm development.

The National Cycle Network in Scotland, Route 1 from Aberdeen to John O’Groats also includes Orkney and Shetland. The National Cycle Network also follows the same route from Lerwick to Sullom Voe and will therefore be in close proximity to the Viking Wind Farm development.

Cycling with the Shetland Wheelers club for recreation is popular. Cycling laps include the Laxfirth loop and hill climbs include Wornadale hill on the A971.

(d) **View points – cycling/driving tours**

A number of viewpoints are identified on the OS maps for Shetland and would be of interest to both cyclists and motorists touring around Shetland. Specific viewpoints (Figure 19.2) identified on roads within close proximity to the Viking Wind Farm development include the following:

- South Nesting - B9075 World War II Watch Tower on left beyond Brettabister up the Hill of Kirkward.
- Tingwall/Whiteness – A971 Wornadale Hill
- Weisdale - A971 –Hill of Sound near Tresta

The Viking Wind Farm development will also be visible from numerous locations along the following roads:

- A970
- A971
- A968
- B9071
- B9075
- B9076

All are identified as tourist routes and used to access various attractions in the central and north mainland.

(e) **Angling/fishing**

Shetland offers anglers sea fishing in the firths and voes and fresh water fishing in the numerous inland loch and lochans. Sea fishing in the voes and firths includes salmon and sea trout and the burns provide breeding stock.

The Viking Wind Farm study area includes 11 water catchments with five fish species identified during the Fish Survey (Chapter 10, Appendix 10.6). Salmon have been identified in the Laxo and Burrafirth catchments. There are a number of lochs and lochans used for fishing brown trout and sea trout within the Viking Wind Farm study area, some of which are promoted and others known and used by locals. Of those promoted, Gossa Water and Laxo Water are within the Viking Wind Farm development (Figure 19.3).



Shetland is not a destination for deer stalking or shooting, although there is potential for rough shooting over the moors. Grouse, snipe, woodcock and mountain hares are present within the Viking Wind Farm study area.

(f) **Golf**

There are two 18-hole golf courses in Shetland. Dale, near Lerwick, is the home of Shetland Golf Club and further north in Whalsay, Whalsay Golf Club is based at Skaw, Taing (Figure 19.2). There is also a nine-hole course at Asta, north of Scalloway.

None of these golf courses is located in the central mainland and therefore close to the Viking Wind Farm development.

(g) **Other recreational activities**

The spectacular coastal environment provides opportunities for a variety of recreational activities, including pony trekking, rock climbing, diving and sea kayaking. Due to the location of these activities being confined to the coast and therefore outwith the vicinity of the Viking Wind Farm development they are not considered further in this assessment.

The northerly latitude and rural nature of Shetland, with minimal light pollution, provide excellent conditions for astronomy and 2009 has been listed as the Year of Astronomy. Astronomy observations include noctilucent clouds and the *Aurora borealis*.

## 19.6 IMPACT ASSESSMENT

### 19.6.1 Basis of assessment

(a) **Development characteristics**

The assessment is based upon the following inputs:

- Wind farm design and layout described in Chapter 4 and Figure 4.1;
- Construction programme described in Chapter 4; and
- Zone of Visual Influence (ZVI) and landscape and visual effects as described in Chapters 8 and 9.

(b) **Assumed design, management and mitigation measures**

Full details of design, management and mitigation measures are provided in Chapter 4. Account is also taken of the Viking Wind Farm Habitat Management Plan (HMP) as described in Chapter 10, Appendix 10.9.

(c) **Tourists' perceptions of wind farms in Scotland**

The most recent study by Glasgow Caledonian University (2008) states that "In total, three-quarters of people felt wind farms had a positive or neutral impact on the landscape, of which:

- 39 % of respondents were positive about wind farms,
- 36 % had no opinion either way, and
- 25 % were negative (including 10 % who were strongly negative).

It is therefore anticipated that a small percentage of tourists would feel that the Viking Wind Farm would have a negative impact on the landscape. However, it is anticipated that only a very small group would be so offended that may change their intentions about revisiting Scotland (Glasgow Caledonia University, 2008).

Hill walking has been identified as an important attraction in Shetland. The review (Glasgow Caledonian University, 2008) found that 19 % of respondents whose main activity was indicated as walking/hill walking (where the landscape change is a major part of the experience) indicated a negative attitude to wind farms; lower than the overall figure of 25 %. Likewise a higher proportion of hill walkers held positive views of wind farms (45 % versus 39 %).

The findings of the review (Glasgow Caledonian University, 2008) also found that there is often strong hostility to developments at the planning stage on the grounds of the scenic impact and the perceived knock on effect on tourism but over time hostility to wind farms lessens and they become an accepted even valued part of the scenery. In Denmark, a majority of tourists regard wind turbines as a positive feature of the landscape

Lastly experience from elsewhere indicates that an established wind farm can be a tourist attraction in the same way as a hydro-electric power station.

**19.6.2 Receptor sensitivity**

Receptor sensitivity is summarised in Table 6 using the definitions detailed in Table 5.

**Table 6: Summary of receptor sensitivity**

Category	Sites	Description	Relative Popularity	Sensitivity (defined in Table 5)
Recreational - Walking	Core Paths	Footpaths	Medium	Medium
Recreational - Walking	Recreational Routes	Footpaths	High	Medium
Recreational - Walking	Scalla Fell	Marilyn - hill	Low	Medium
Recreational - Cycling	North Sea Cycle Route & National Cycle Route	Cycle routes	Low	Medium
Recreational - Cycling	Recreational routes	Cycle routes	Medium	Medium
Driving	Central and North Mainland	Roads	Medium	Medium
Driving	Viewpoints	Roads	Medium	Medium
Visitor Attractions	Nature Conservation Sites	SNH and RSPB sites	High	Low
	Nature and Wildlife	Boat trips,	High	Low
Visitor Attractions	Cultural Heritage Sites	Historic Scotland sites	High	Low/Medium
Visitor Attractions	Tourist amenities (art galleries,	Art galleries, museums, interpretation &	High	Low/Medium

Category	Sites	Description	Relative Popularity	Sensitivity (defined in Table 5)
	museums etc)	heritage centres and craft centres		
Sporting	Fishing/angling	Lochs and Lochans	Medium	Low
Sporting	Golf courses		Medium	Low

### 19.6.3 Construction impacts

#### (a) Restriction of access

##### Impact magnitude

Intermittent restrictions on informal access to the Viking Wind Farm site are expected to occur and additional construction traffic will be using the roads (Chapter 15), including exceptional loads. These restrictions are planned to be temporary and of a short duration. The scheduled duration of the construction programme is five years during the summer months only. Following completion of the construction programme, access restrictions will be lifted.

##### Impact significance

The effects of access restrictions to the Viking Wind Farm site are expected to be of minor significance. The area of the Viking Wind Farm is currently not identified as one of the recreational walking routes (Figure 19.2) or core paths. These are mainly located around the coastal areas.

#### (b) Effects on visitors perception of landscape character and visual amenity

The restriction and disturbance of tourist attractions (e.g. cultural heritage sites) have been assessed as the effects on visitors perception of landscape character and visual amenity.

##### Impact magnitude

There are a large number of nationally important cultural heritage sites throughout Shetland and a small number of sites are located within or close to the Viking Wind Farm development, namely Hill of Dale Chambered Cairn, Grobsness Haa and Stanydale Temple.

##### Impact significance

The effects of restricted access and disturbance to the cultural heritage sites located close to the Viking Wind Farm development are expected to be of moderate significance. The most frequently visited and highest profile cultural heritage sites for tourists to Shetland are out with the Viking Wind Farm development area.

#### (c) Disturbance of recreational activities, such as fishing activities

##### Impact magnitude

There are a large number of lochs and lochans on Shetland used for fishing. Two of these lochans are located within the Viking Wind Farm development area and intermittent restrictions on informal access to these lochans are expected to occur during construction.

*Impact significance*

The effects of limited access restrictions and disturbance to fishing activities on the two lochs (Gossa Water and Loch of Skellister) are expected to be of minor significance. There are a large number of alternative lochans available for fishing throughout Shetland.

**19.6.4 Operational impacts****(a) General**

Section 19.6.3 details the assessment of operational impacts on the:

- restriction of access;
- effect on visitors perception of landscape character and visual amenity;
- disturbance of recreational activities.

**(b) Visibility of turbines**

The visual impact assessment (Chapter 9) has been undertaken up to 30 km from the site boundary, and includes a number of viewpoints of tourism interest. The visual impact assessment for cultural heritage features is considered up to 10 km from the site boundary (Chapter 13). The study area when assessing the visual impact from the tourism and recreation perspective is the whole of the Shetland Isles.

*Impact magnitude*

Views of the Viking Wind Farm development are anticipated at a variety of locations and distances throughout mainland Shetland. Significant visual impacts will occur within a 15 km radius of the wind farm development.

Views of the wind farm development from locations beyond 15 km would be possible, although are unlikely to result in significant impacts. As far as possible the development has been designed to minimise impacts on the larger settlements and other key receptors.

The south mainland is dominated by a series of ridges which restrict views towards the Viking Wind Farm development.

*Impact significance*

A number of the very popular tourism attractions and activities are located around the coast of the mainland and islands, such as recreational walking routes and nature conservation sites. Cultural heritage attractions are located throughout the mainland of Shetland but none of the very popular attractions are located within the Viking Wind Farm development. Although the Viking Wind Farm development would be visible more than 15 km from tourist attractions, the turbines would appear as only a small part of the overall view.

The Kergord Plantations SSSI and Burn of Laxo SSSI are also close to the Viking Wind Farm development but tourists visiting these locations are primarily interested in the flora or birds for which these sites have been designated. However, within 15 km of the Viking Wind Farm development, the turbines will be highly visible to a number of tourist attractions and accommodation facilities, such as Weisdale Mill. It is anticipated that the visibility of the turbines would be of moderate significance and could result in some tourists' choosing alternative locations and activities within Shetland.

The secondary impacts of turbine visibility with tourists choosing to visit Shetland is expected to be of minor significance, although it is acknowledged that a minority of tourists may choose not to visit Shetland.

(c) **Access provision**

*Impact magnitude*

During normal operating conditions, there will be no specific restrictions on access to the Viking Wind Farm development. In the event that major maintenance operations are required, warning signage will be posted advising the public of the locations, scale and duration of maintenance activities, in a similar fashion to the method used during construction and decommissioning.

The Viking Wind Farm development will introduce a network of additional access tracks into the area. The area is not of high landscape/scenic value and is also not a priority area for most tourists interested in visiting locations of cultural or wildlife interest. Therefore the area is not promoted and used routinely by walkers and cyclists at present. Although if planned, managed and promoted through an access management plan, for example as core paths within the Shetland Access Strategy, the increased access could play a role in positively promoting new walking and cycling routes within Shetland.

The site is an important area for rare breeding moorland birds, a number of which are listed as Schedule 1 species under the Wildlife and Countryside Act 1981 (Chapter 11). It is therefore of interest to birdwatchers, and increased use of these tracks for access could result in disturbance. The Scottish Outdoor Access Code provides detailed guidance on the responsibilities of those exercising access rights and of those managing land and water, including care for the environment. Increased access would therefore require to be appropriately managed.

The Marilyn, Scalla Fell, is located within the Viking Wind Farm development area and will attract a small number of hill walkers keen on bagging these hills.

During normal operating conditions, there will be no specific restrictions on access to the fishing lochans within the Viking Wind Farm development. As part of the Viking Wind Farm development a number of improvements have been proposed to the water catchments for these lochans (Chapter 10 and Appendix 10.9). It is anticipated that the habitat management plan including Gossa Water, Gossawater Burn and Laxo Burn will result in an enhanced fisheries management programme and consequent improvements in the fish stock.

*Impact significance*

The increase in access provision could have a moderate positive effect, providing access is appropriately managed.

The implementation of the habitat management plan for the Gossa Water, Gossa Burn and Laxo Burn are expected to have a beneficial impact on fisheries, although not significant when accounting for the total number of tourists visiting Shetland for fishing.

### 19.6.5 Construction and operational secondary impacts

#### (a) Recreational activities and cultural heritage

##### Impact magnitude

The most important highlight for tourists to Shetland is scenery and the most frequently mentioned recreational activities were general sightseeing and walking (AB Associates, 2006). Landscape is an important component of all these activities and any change in landscape/visual impact will potentially influence tourist behaviour. For example, tourists visiting attractions in the central and north mainland will use the main routes for driving or cycling through the central mainland to reach their chosen locations or activities, assuming that they arrive by ferry at Lerwick or by aeroplane at Sumburgh. Full details of the landscape character are provided in Chapter 8 but in general the landscape of Shetland is of a medium or high scenic quality as a result of the harmonious combinations of land, sea and sky and lack of incongruous features. The Viking Wind Farm development is not located in the areas of highest scenic value in Shetland (as defined by sites of special interest and national scenic areas), or close to any of the key honey pot natural history or heritage tourist sites such as in Unst, Noss, Eshaness, or Sumburgh Head.

##### Impact significance

The influence of the Viking Wind Farm development on the landscape value of Shetland as a whole with respect to tourists' perceptions of the landscape/scenic character of Shetland is not expected to be significant.

#### (b) Economic

##### Impact magnitude

The Viking Wind Farm may act as an attraction on Shetland which could contribute to the local economy by increased tourism. However, some tourists may feel that the wind farm deters from the general landscape/scenic character of Shetland as a whole, and may deter them from visiting the island. The majority of recreation and tourism attractions on Shetland are not located within the boundary of the Viking Wind Farm and therefore the presence of the wind farm during construction and operation will mainly impact visitors perception of landscape character and visual amenity from surrounding attractions and view points.

##### Impact significance

A recent study of tourists' perceptions of wind farms in Scotland indicated that 75 % of tourists thought that wind farms have a positive or neutral impact on the landscape and 25 % of tourists thought that wind farms have a negative effect of tourist attractions. Of the 25 % who perceived wind farms to have a negative effect, 10 % felt that wind farms have a strongly negative impact (Section 9.6.1.c). The impact of the wind farm on tourists choosing to visit Shetland is expected to be of minor significance, a full assessment of the economic impacts has been carried out in Chapter 17.

### 19.6.6 Assessment of cumulative impacts

There is one small wind farm, comprising 5 turbines, located at Burradale, about 11 km south of the Viking Wind Farm. As with the Viking Wind Farm, the Burradale Wind Farm is not located in a sensitive location for tourists, being away from major tourist

destinations and scenic areas. Cumulative impacts on tourism and recreation are not anticipated to be significant.

In April 2009 an application was made for a small wind farm comprising five turbines at Cullivoe, on the north-west coast of the island of Yell. It is approximately 30 km from the nearest part of the proposed Viking Wind Farm. Cumulative effects are not expected to arise from this development.

## 19.7 MITIGATION

Mitigation for the key potential effect on tourism and recreation, namely changes to the landscape amenity of the Shetland Islands, was addressed from the beginning of the design phase and reviewed a number of times as the design developed. This led, for example, to the reduction of the proposed wind farm from 168 turbines to 150 turbines; and extensive review of the layout design where it was visible from Lunna House and other specific viewpoints. Further details of the design process are provided in Chapter 4 and Appendix 4.7.

Mitigation measures during the construction phase include:

- the development of a communication strategy to be used by Viking Energy to provide consistent and regular updates to both the public and other interested parties, such as tourists;
- careful planning of vehicle movements through a traffic management plan to minimise disruption to both local and tourist traffic during the construction period; and
- the extension of construction period to 5 years with a reduction in number of workers requiring accommodation annually resulting in adequate accommodation being available without the availability of accommodation for tourists being affected.

Mitigation measures during the operation phase include:

- commitment to an access management plan that maximises the potential benefits of the development through provision of public access with organised tours, development of tourism view points, development of mountain bike routes away from restricted areas, promotion of alternative walking routes, improvement in car parking;
- promotion of Shetland as a sustainable community with respect to energy production; and
- promotion of Shetland as a green energy tourist destination.

Other mitigation measures to address visual impacts, traffic, archaeological, ornithological and ecological impacts will also facilitate impacts on recreation and tourism (Chapters 9, 10, 11 and 13).

## 19.8 MONITORING

Monitoring measures during the construction phase include:

- monitoring of tourist numbers, frequency of visit and their overall perception as to how the region is changing with respect to overall value, as construction work progresses;
- monitoring of available accommodation spaces within a 24 month period leading up to the start of construction activities to consider the significance for the tourism sector in reducing available spaces;
- monitoring of vehicular traffic routes to ensure that mitigation measures designed to reduce traffic impacts are adequate; and
- establishment of a Shetland Wind Farm Environmental Advisory Group to examine and advise on the environmental impacts of the Viking wind farm during construction, operation and decommissioning

The monitoring measures during the operational phase include:

- monitoring of tourism numbers, frequency and perceptions; and
- monitoring of the success and implementation of the access management plan

## 19.9 SUMMARY

Table 7 summarises the impacts on recreation and tourism from construction activities, based on the criteria listed Table 2 and the effects evaluation detailed in Section 19.4.3.

**Table 7: Summary of recreation and tourism impacts from construction operations**

Construction effects	Impact	Impact Magnitude	Assessment of Effects
General	Restriction of Access	Loss of recreational amenity	Minor
	Effect on visitors perception of landscape character and visual amenity	Loss of tourist amenity	Moderate
	Disturbance of recreational activities, such as fishing activities	Loss of recreational amenity	Minor
Mobile plant operations	Refer General Impact	Loss of tourist income	Minor
Borrow pit operations	Refer General Impact	Loss of tourist income	Minor
Traffic	Refer General Impact	Loss of tourist income	Minor
Access Track including cable laying	Refer General Impact	Loss of tourist income	Minor
Construction compounds	Refer General Impact	Loss of tourist income	Minor



Table 8 summarises the impacts on recreation and tourism from construction activities, based on the criteria listed Table 3 and the effects evaluation detailed in Section 19.4.3.

**Table 8: Summary of recreation and tourism impacts from operational activities**

Operational effects	Impact	Impact Magnitude	Assessment of Effects
General	(refer Table 3)	Loss of tourist income	Minor
Turbines	Visibility of turbines	Loss of landscape value and visual amenity	Moderate
Tracks	Access provision	Creation of recreational amenity	Moderate
Anemometers	Refer General Impact (Table 7)	Loss of tourist income	Minor
Sub-station/control building	Refer General Impact (Table 7)	Loss of tourist income	Minor
Crane pads	Refer General Impact (Table 7)	Loss of tourist income	Minor
Borrow pits	Refer General Impact (Table 7)	Loss of tourist income	Minor

Table 9 summarises the impacts on recreation and tourism from construction activities, based on the criteria listed Table 4 and the effects evaluation detailed in Section 19.4.3.

**Table 9: Summary of recreation and tourism secondary impacts from construction and operational activities**

Construction & Operational Effects	Secondary Impact	Impact Magnitude	Assessment of Effects
Recreational Activities and Cultural Heritage	Changes in cultural heritage settings may impact tourism	Loss of tourist income	Minor
Economic	Changes in tourism activity may impact on economic development and affluence	Loss of tourist income	Minor

In summary it is expected that the Viking Wind Farm development will not have an overall significant impact on tourism in Shetland. The Viking Wind Farm development is not located within a designated area or close to any of the most popular tourist attractions in Shetland. The turbines are located away from key tourist attractions and based on experience from elsewhere, visitors should not be put off from coming to Shetland (Avayl Engineering and A B Associates Ltd, 2008). However, it is difficult to quantify these impacts.

Additionally, the Viking Wind Farm development will provide opportunities to promote Shetland as a green tourist location, and the provision of new access tracks will increase and enhance recreation facilities.

## 19.10 REFERENCES

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